

Description of Additional Supplementary Files

File Name: Supplementary Data 1

Description: Localities for 107 specimens of *Electrophorus*.

File Name: Supplementary Data 2

Description: Morphometric and meristic data for specimens of *Electrophorus electricus*, and holotypes and paratypes of *Electrophorus varii* sp. nov. and *Electrophorus voltae* sp. nov. N = number of individuals. H = holotype.

File Name: Supplementary Data 3

Description: List of sequenced genes, Genbank accession numbers for 107 specimens of *Electrophorus* and six outgroup species.

File Name: Supplementary Data 4

Description: List of primers, annealing temperature and time, ingroup and outgroup obtained fragment sizes, and sources.